

Appln No. 10/533,856
Amdt date April 18, 2007
Reply to Office action of January 18, 2007

Amendments to the Drawings:

The attached sheet of drawings include changes to FIG. 1. This sheet, which includes FIG. 1, replaces the original sheet including FIG. 1.

Attachment: Replacement Sheet (1 sheet)
 Annotated Sheet Showing Changes (1 sheet)

REMARKS/ARGUMENTS

Claims 1 to 18 are pending in the present application.

Claims 11 and 13 have been rejected under 35 U.S.C. 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Accordingly, claim 11 has been amended to recite “a support element” and “a stator”. Claim 13 has been amended to recite “a stator”. Therefore, the rejection should be withdrawn.

Claims 1 to 6, 14, and 18 have been rejected under 35 U.S.C. 103 (a) as being unpatentable over Sesselmann et al. (WO 120753 A1) in view of Miller et al. (US 4,864,176).

Claim 1 has been amended to specify that the motor shaft “is mounted rotatably to a housing of one of the drive device and the axial field motor via a support element comprising a number of radial webs.” This finds support for example on page 6, third paragraph of the English translation of the original PCT application.

Claim 1 of the instant application specifies that a motor shaft is mounted rotatably to a housing via “a support element comprising a number of radial webs.” Claim 1 further states that radial forces are introduced into said housing through “positive locking regions” extending axially from said radial webs.

In contrast to claim 1 of the instant application, Sesselmann et al. does not teach or suggest the noted recitations.

Sesselmann et al. discloses a drive device for adjustment devices in motor vehicles, the drive device includes a gearing and a motor being integrated into a single unit. The motor is coupled to the gearing via a motor shaft, the motor shaft at its one end being mounted rotatably to a housing (see Fig. 4 of Sesselmann et al., which shows motor shaft 10 being mounted within housing 5).

In contrast to the instant application, Sesselmann et al. does not teach or suggest the motor shaft to be mounted to a housing via a support element comprising radial webs. No support element is disclosed by Sesselmann et al. for mounting the motor shaft. Rather, the motor shaft 10 within Sesselmann et al. is mounted at its one end to the housing 5 and at its other

end carries gear wheels 24, 25, 26 (see Fig. 1a) and a carrying plate 1, which are part of the gearing and do not serve for mounting the motor shaft 10.

In addition, Miller et al. does not teach or suggest the noted limitations. Miller et al. discloses a dynamoelectric machine having a rotor 14 and a stator 12, the rotor 14 being mounted in a housing 16 via a rotor shaft 22. In this context, as is explained in col. 4, lines 14 to 25 of Miller et al., the rotor shaft 22 is mounted rotatably in the housing 16 via bearings 20 “at each end of rotor shaft 22” (col. 4, lines 17, 18).

Miller et al. discloses a stator assembly 12 having a tube 32 providing an interior, longitudinally extending central passageway for receiving rotor 14 (see col. 4, lines 28 to 32) and a stator support structure 30. According to col. 4, lines 35 to 48 of Miller et al., the stator support structure 30 includes a pair of plates 36 extending radially outward from the ends of tube 32. Stator assembly 12 is, via its plates 36, “interference fit” within housing 16 (see col. 4, lines 27, 28).

However, in contrast to the instant application, Miller et al. does not teach or suggest that the motor shaft is mounted rotatably in the housing “via a support element comprising radial webs.” Rather, the stator support assembly 12 according to Miller et al. solely serves to support the stator. According to Miller et al., rotor shaft 22 is mounted in the housing via axial bearings 20 at its two ends, whereas the stator assembly 12, namely tube 32, provides only a passageway for the rotor 14, but no bearing for mounting the rotor 14 (see Fig. 1 and col. 4, lines 30 to 32). The motor shaft 22 within Miller et al. is not supported by the stator assembly 12, and no radial forces are introduced via the stator assembly 12 into the housing 16.

Furthermore, Miller et al. does not teach or suggest that radial forces are introduced into a housing through “positive locking regions” extending axially from radial webs of a support element for rotatably mounting the motor shaft.

Although Miller et al. teaches to mount a stator using a support element with radially extending plates, Miller et al. does not teach to support the motor shaft within the stator assembly. With respect to the motor shaft, Miller et al. teaches to mount the motor shaft in the housing using axial bearings.

Accordingly, Sesselmann et al. in combination with Miller et al., do not teach or suggest rotatably mounting a motor shaft via a support element comprising radial webs. For the reasons discussed above, one of ordinary skill in the art would not have combined Miller et al. with

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Sesselmann et al. to provide rotatably mounting a motor shaft via a support element comprising radial webs as recited in claim 1.

Claim 18 has also been amended to specify that the motor shaft “is mounted rotatably to a housing of one of the drive device and the axial field motor via a support element comprising a number of radial webs.”

For the reasons presented above, claims 1 to 6, 14, and 18 are patentable over any one or a combination of Sesselmann et al., Miller et al. and Niki et al.

Claims 7 to 9 have been rejected under 35 U.S.C. 103 (a) as being unpatentable over Sesselmann et al., in view of Miller et al., and further in view of Seidou et al. (US 4,864,176).

As described above, Sesselmann et al. and Miller et al. fail to teach or suggest rotatably mounting a motor shaft via a support element comprising radial webs. Seidou (US 5,479,058) also does not teach or suggest that a motor shaft is mounted rotatably to a housing via “a support element comprising a number of radial webs.” Furthermore, Seidou does not teach or suggest that radial forces are introduced into the housing through “positive locking regions” extending axially from radial webs. Seidou provides a geared motor comprising a stator 21 and a rotor 24 (see Fig. 2), the rotor 24 being mounted to a housing 22 via a bearing 32. The rotor 24 is coupled to a gearing comprising gear wheels, one of which is mounted via a shaft 36 to the housing 22.

Therefore, claims 7 to 9 are patentable over Sesselmann et al., in view of Miller et al., and further in view of Seidou et al.

Claim 15 has been rejected under 35 U.S.C. 103 (a) as being unpatentable over Sesselmann et al., in view of Miller et al., and further in view of Niki et al. (JP 2001-069722 A).

Niki et al. also fails to teach or suggest mounting a motor shaft rotatably to a housing via “a support element comprising a number of radial webs.” Niki et al. provides a motor with a decelerating mechanism 3 and an output shaft 5 coupled to a load. Niki et al. teaches to mount the output shaft 5 in a housing 10 via a bearing (see Fig. 6). Thus, in contrast to the instant application, Niki et al. does not suggest any other means for mounting the output shaft, in particular a mounting via a support element comprising radial webs.

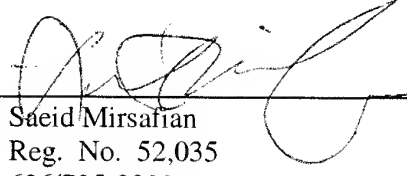
Therefore, claim 15 is patentable over Sesselmann et al., in view of Miller et al., and further in view of Niki et al.

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Claims 10, 12, 16 and 17 have been indicated to be allowable. Applicants have rewritten claims 10 and 12 in independent form so as to include all limitations of their base claims including any intervening claims. Claims 10, 12, 16 and 17 are thus allowable.

In view of the amendments and remarks as set forth above, the application is thought to be in condition for allowance.

Respectfully submitted,
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